

FIG. 1

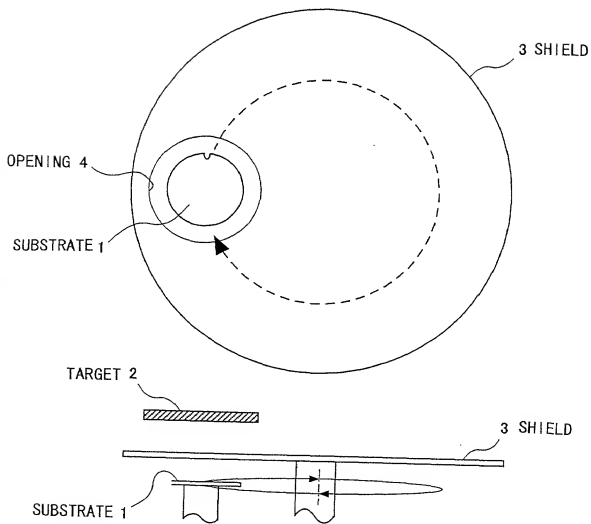


FIG. 2

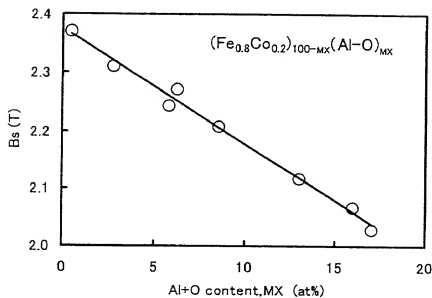


FIG. 3

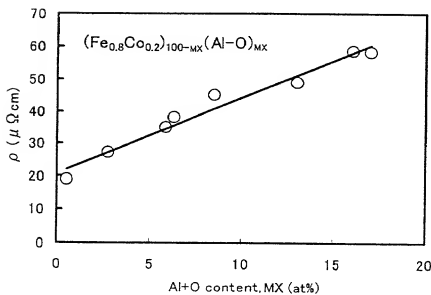


FIG. 4

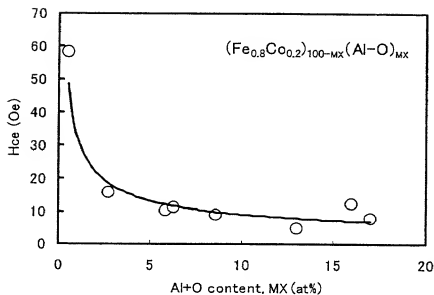


FIG. 5A

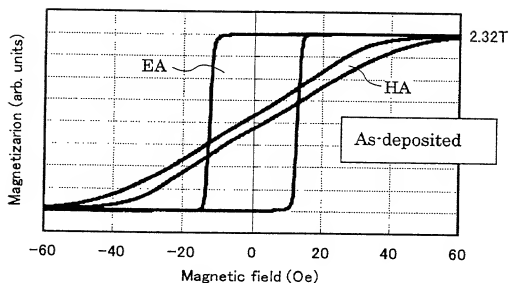


FIG. 5B

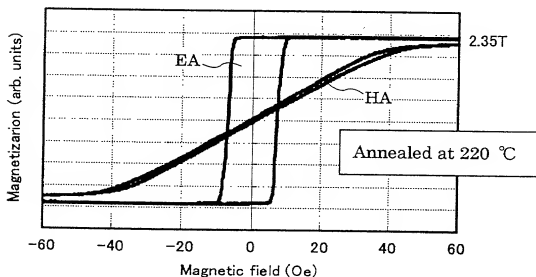


FIG. 6

Film structure		H _{ce} (Oe)
① (Fe77.7Co19.5Al0.6O2.2) 0.5 μm	As-deposited	15
② (Fe77.7Co19.5Al0.6O2.2) 0.5 μm	Annealed at 220°C	7
③ (Fe77.7Co19.5Al0.6O2.2) 0.5 μm / (Ni50Fe50) 1.6 μm	As-deposited	4
④ (Ni50Fe50) 3nm / (Fe77.7Co19.5Al0.6O2.2) 0.5 μm	Annealed at 220°C	2
⑤ (Ni80Fe20) 3nm / (Fe77.7Co19.5Al0.6O2.2) 0.5 μm	As-deposited	10
⑥ (Ni80Fe20) 3nm / (Fe77.7Co19.5Al0.6O2.2) 0.5 μm / (Ni50Fe50) 1.6 μm	As-deposited	8
	As-deposited	1

FIG. 7

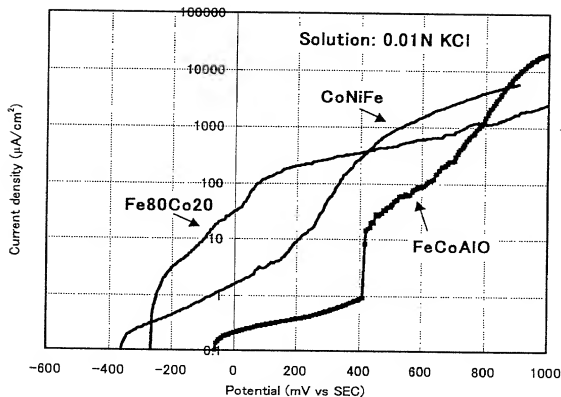
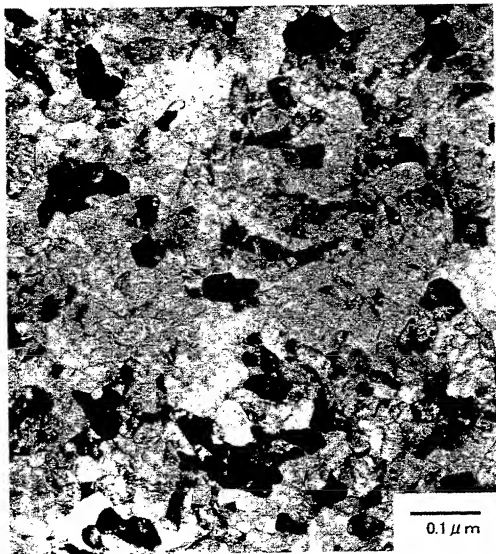


FIG. 8



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FIG. 9A

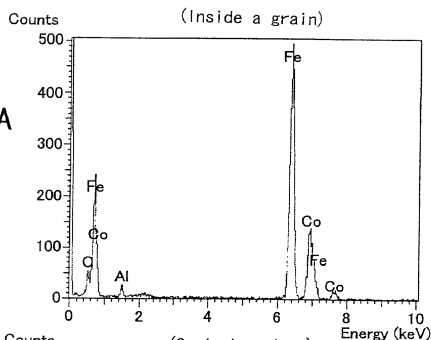


FIG. 9B

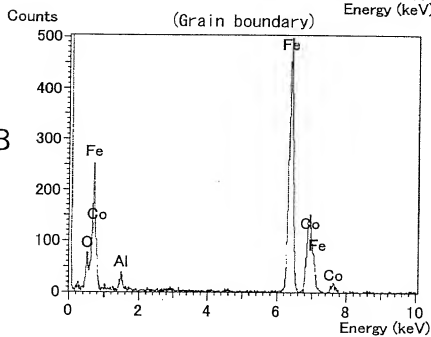


FIG. 10

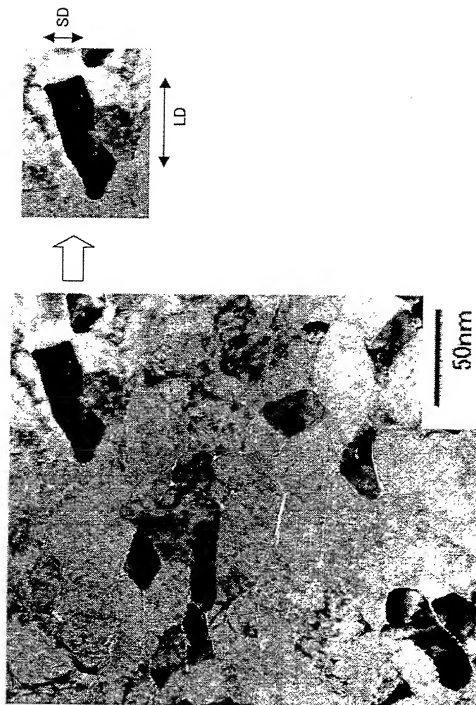
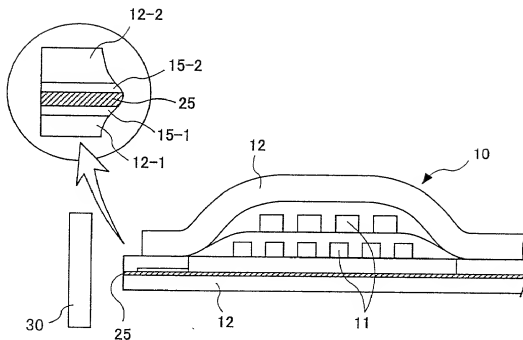


FIG. 11

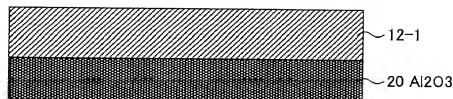
Alloy composition (at%)		Sputtering pressure (Pa)	Residual stress σ (10^8 dyne/cm ²)	H _{kh} (Oe)
Fe	Al			
71.3	18.1	0.5	-5.2	47.1
71.8	18.1	0.7	-0.9	25.5

FIG. 12



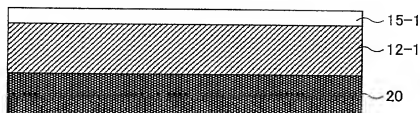
PLATING (NiFe,CoNiFe)

FIG. 13A



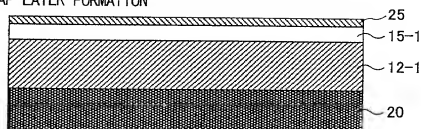
FeCoMo FILM FORMATION BY SPUTTERING

FIG. 13B



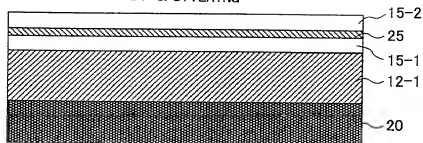
Al₂O₃ GAP LAYER FORMATION

FIG. 13C



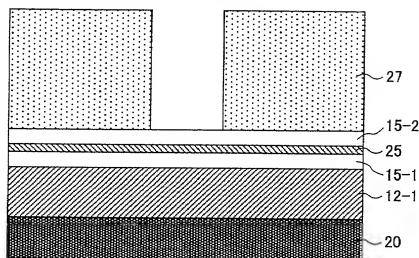
FeCoMo FILM FORMATION BY SPUTTERING

FIG. 13D



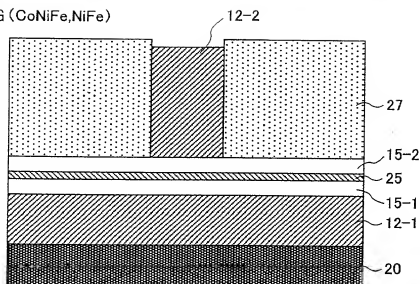
PATTERN FORMATION BY USING A RESIST

FIG. 14A



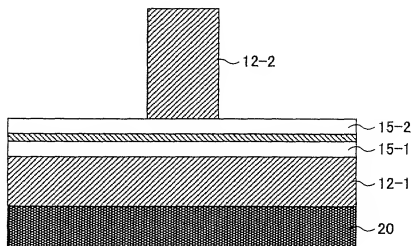
PLATING (CoNiFe, NiFe)

FIG. 14B



REMOVING THE RESIST

FIG. 15A



ETCHING : FORMING AN END-PORTION MAGNETIC POLE

FIG. 15B

